

Embedded Data Collectors
August 13, 2014; 2:30-4:00 Eastern

The Embedded Data Collector (EDC) is a stand-alone dynamic testing method to monitor concrete pile installation for bridge foundations. The EDC system consists of a wireless radio/controller connected to strain and accelerometer gauges at the top and bottom of the pile prior to concrete placement. The signals from the gauges are collected, stored, and wirelessly transmitted from the pile and are analyzed "real time" (blow by blow) with a laptop computer in the field.

As a pile monitoring system, EDC gives both the owner and contractor new options for the design, construction, and quality control of prestressed concrete piles. EDC gauges can detect signs of potential pile tip damage significantly earlier than top-gauge-only systems, which can increase the quality of the driven foundation. Embedding top and tip devices also eliminates the time and risk of manual placement of gauges in the midst of a pile driving operation. Additionally, EDC offers the capacity to test a large number of piles in a labor and time efficient manner and requires less expert time in the field. Future testing throughout the life cycle of the pile may also be possible. In short, the potential for improvements in time, cost, installed pile quality, and worker safety is substantial.

In this webinar, the Florida Department of Transportation, North Carolina Department of Transportation, and Virginia Department of Transportation will share their experiences using the EDC system. As early adopters, each Department will present how they researched, piloted, tested, compared, developed, and implemented this technology. Participation in this webinar will allow you, as a potential user of this technology, to determine how your organization may pilot and adopt this new option for monitoring concrete pile installations.

Presenters

Introduction/Moderator – Silas Nichols, Geotechnical Engineer, Federal Highway Administration

Rodrigo Herrera - Assistant State Geotechnical Engineer, Florida Department of Transportation

Mohammed Mulla - Geotechnical Engineering Unit, North Carolina Department of Transportation

Ashton Lawler - State Program Manager for Geotechnical Design of Structures, Virginia Department of Transportation

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